

Clean Set of Claims

F 1 sub 61

1. A current source switching circuit with reduced charge injection, comprising:
a current source;
a transistor switch;
a pull-down mirror path in parallel with said transistor switch operating to equalize a current level produced by said current source; and
a first load;
wherein said transistor switch and said pull-down mirror path operate to substantially continuously reduce said charge injection flowing to said first load during switching of said current source while said current source remains powered.

F 2 sub C4

18. A method of reducing charge injection from a current source through a current switch into a load, said method comprising:
providing a pull-down mirror path in parallel with said current switch, said pull-down mirror path and said current switch operating to equalize a current level produced by said current source;
turning a switch in said pull-down mirror path on when said current switch is turned off; and
turning said switch in said pull-down mirror path off when said current switch is turned on;
wherein said current switch and said pull-down mirror path operate substantially continuously to reduce said charge injection flowing to said load during switching of said current switch while said current source remains powered.

F3
Sub H1

21. A method of switching a current source out from a load, said method comprising:

opening a transistor switch connecting said current source to said load; and

substantially simultaneously with said step of opening, closing a switch to a pull-down mirror path in parallel with said transistor switch so that current from said current source flows through said pull-down mirror path, said pull-down mirror path and said transistor switch operating to equalize a current level produced by said current source;

wherein said load substantially continuously receives said current flowing from said current source to reduce charge injection from said current source to said load during switching of said current source while said current source remains powered when said transistor switch is opened.

Mark 63

22. Apparatus for switching a current source out from a load, comprising:

means for opening a transistor switch connecting said current source to said load; and

means for closing a switch to a pull-down mirror path in parallel with said transistor switch at substantially simultaneously a same time as said means for opening opens said transistor switch so that current from said current source flows through said pull-down mirror path, said pull-down mirror path and said transistor switch operating to equalize a current level produced by said current source;

wherein said load substantially continuously receives said current flowing from said current source and charge injection is reduced from said current source to said load during switching of said current source while said current source remains powered when said transistor switch is opened.